

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018079**Date Inspected:** 11-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** N/A**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12CE (Green Tag DCP)

This QA Inspector performed Green Tag Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan for the Segment 12CE from Panel Point (PP) 115 to PP 117.5 at the following locations:

The Floor Beam (FB) flatness was verified and measured from East and West side of the FB at Panel Points (PP) 115. The QA Inspector measured the flatness using 1500mm Straight Edge.

The Deck Panel to the Deck Panel Diaphragm plate plumbness and flatness was verified and measured from east and west side of the Deck Panel Diaphragm at Panel Points (PP) 115, PP 115.2, PP 115.5, PP 116, PP 116.5 and PP 117. The QA Inspector measured the plumbness using carpenter square and performed a flatness check using 710mm Straight Edge.

The skin flatness was verified and measured across the longitudinal butt weld at Side Panel (SP) to Corner

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

Assembly (CA) at the Bike Path (BK) side and Cross Beam (CB) side from Panel Point (PP) 115 to PP 117.5. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The skin flatness was verified and measured across the longitudinal butt weld at Deck Panel (DP) to Corner Assembly (CA) at the Bike Path (BK) side and Cross Beam (CB) side from Panel Point (PP) 115 to PP 117.5. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The diameter of the cope holes at the Corner Assembly (CA) were verified and measured at Panel Points (PP) 115, PP 115.2, PP 115.5, PP 116, PP 116.5 and PP 117 at the Bike Path (BK) side and Cross Beam (CB) side. The QA Inspector measured the diameter of the cope holes using a 150mm steel ruler.

The protrusion of the Deck Panel (DP) stiffener inside cope holes area at the Corner Assembly (CA) were verified and measured at the Panel Points (PP) 115, PP 115.2, PP 115.5, PP 116, PP 116.5 and PP 117 at the Bike Path (BK) side and Cross Beam (CB) side. The QA Inspector measured the protrusion of stiffener using a 150mm steel ruler.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

### Segment 11EW (Lower Chevron Flatness Survey)

This QA Inspector performed Dimension Control Inspection along with ZPMC QC Mr. Hu Mei Gang on the Splice plate installed at Lower Chevron from East and West side to ensure flatness is within the allowable tolerance before snug tightening the bolts for Segment 11EW at Panel Points (PP) 107 and PP 108 at Cross Beam side at work point W4 and Counter Weight side at work point W3.

The QA Inspector measured the Flatness using 1(One) Meter Straight Edge and the results appeared to be in general compliance with contract requirements.

### Segment 11CE (Lower Chevron Flatness Survey)

This QA Inspector performed Dimension Control Inspection along with ZPMC QC Mr. Zhang Hai Jung on the Splice plate installed at Lower Chevron from East and West side to ensure flatness is within the allowable tolerance before snug tightening the bolts for Segment 11CE at Panel Points (PP) 101, PP 102 and PP 103 at Cross Beam side at work point E4 and Bike Path side at work point E3.

The QA Inspector measured the Flatness using 1(One) Meter Straight Edge and the results appeared to be in general compliance with contract requirements.

### Segment 12AW (Re-entrant Corner)

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan for the Segment 12AW at the following locations:

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

The re-entrant corners at the Floor Beam vertical flange radius were verified and measured on Panel Points (PP) 109, PP 110 and PP 111 at the Counter Weight side, work point W3 and Cross Beam side, work point W4. Inspection was performed at east and west side of Floor Beam. The QA Inspector measured the radius of re-entrant corner using a pre-cut 25mm and 50mm template.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

### Segment 12AW (Cope Holes)

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan for the Segment 12AW at Panel Points (PP) 109, PP 110, PP 111, PP 111.5, PP 112 and PP 112.5 at the following locations:

The Cope hole dimensions located at the Floor Beam to Bottom Panel, Floor Beam to Side Panel and at Longitudinal Diaphragms (East and West side) were verified and measured at the Panel Points (PP) 109, PP 110, PP 111, PP 111.5, PP 112 and PP 112.5 at the Cross Beam (CB) side and Counter Weight (CW) side. The QA Inspector measured the cope holes dimension using a 150mm steel ruler.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations were reported on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Math,Manjunath	Quality Assurance Inspector
<b>Reviewed By:</b>	Dsouza,Christopher	QA Reviewer

---